

The AFHCAN Telehealth Program

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- Telehealth Works – Lessons Learned
- The “Business Case” for Telehealth
- Lessons Learned from Other Programs
- Next Steps – What’s Possible



“Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patients' health status.”

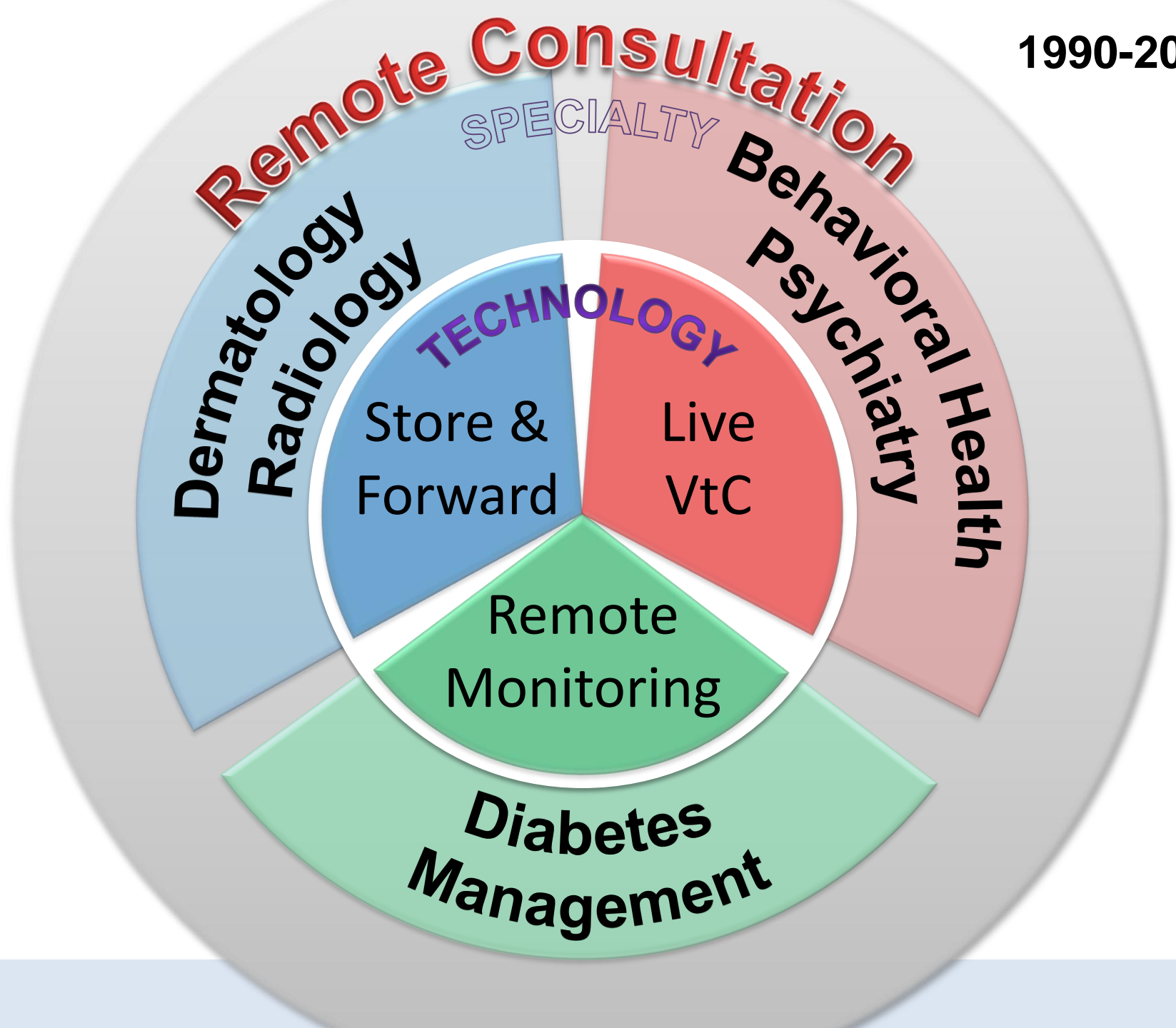
“... telehealth” .. is often used to encompass a broader definition of remote healthcare that does not always involve clinical services. “

ATA Defining Telemedicine

<http://www.americantelemed.org/news/definition.html>



1990-2002



Store & Forward Telehealth

- Low bandwidth requirements
- Static data – e.g. Vital signs
- Static Images
 - Digital camera (megapixel)
 - Scans
 - Captured video images (ENT, Dental, Opthal., Naso.)
- Video Clips – esp. from video devices
- Temporal Data: ECG, stethoscope, tympanometer
- Textual:
 - Health summaries

- ☐ Asynchronous.
- ☐ Can create a case “on the run.”
- ☐ Doctor can respond when available.
- ☐ Many consults are not critical.
- ☐ It is needed as a communication tool.
- ☐ Fits with present model.
- ☐ Minimal onsite technical support is needed.





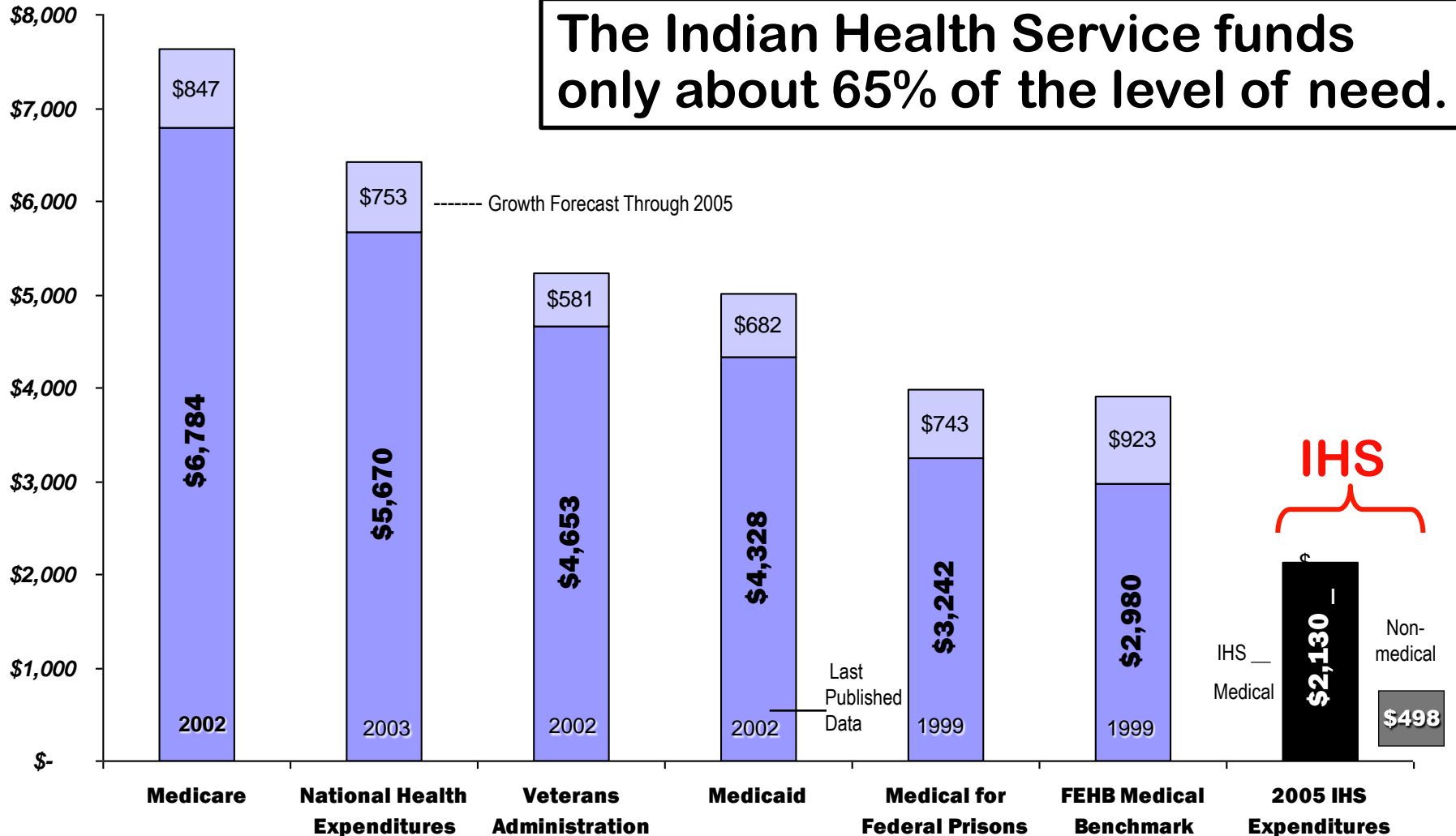
TELEHEALTH WORKS – LESSONS LEARNED

ALASKA NATIVES ARE
THE HEALTHIEST PEOPLE
IN THE WORLD

ANTHC VISION



IHS Appropriations Per Capita Compared to Other Federal Health Expenditure Benchmarks



Designing A Primary Care Tool



- Ear Disease
 - Audiometer, Tympanometer, Video Otoscope
- Heart Disease
 - ECG & Vital Signs Monitor
- Respiratory Illness
 - Spirometer & Vital Signs Monitor
- Trauma, Skin & Wound
 - Digital Camera
- Dental Problems
 - Dental Camera
- General
 - Scanner & Forms



A User Interface Designed by Users

The image displays three overlapping screenshots of the AFHCAN Case Viewer web application, illustrating its user interface design.

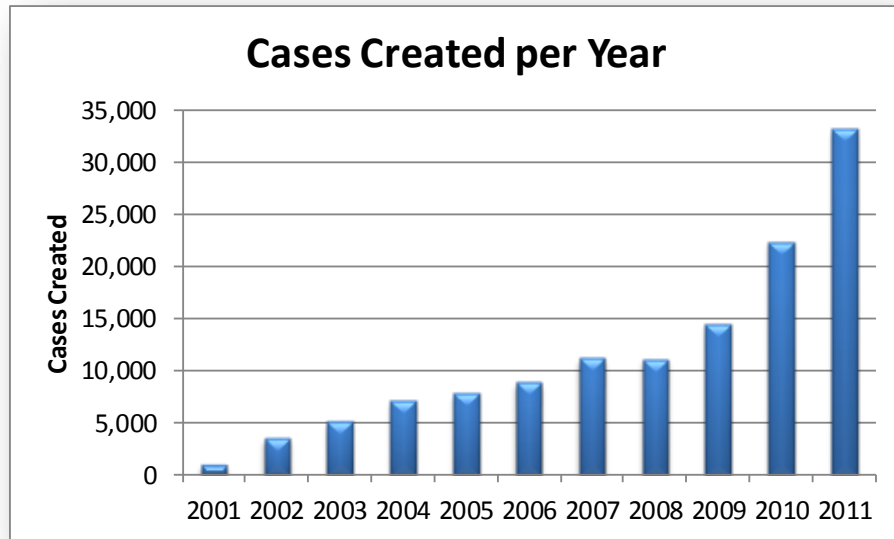
Top Left Screenshot: Shows the main dashboard with a "Start" button and a "Log Out" button. The central area asks "What do you want to do today?" and provides two main options: "Create a New Case" (green button) and "Cases To Review" (blue button). Below these are "Cases Y" (blue button) and "Search A" (orange button).

Top Right Screenshot: Shows the "AFHCAN Case Viewer" interface. It includes a "patient" tab, a "sort" dropdown, and a "cases" list. The "cases" list shows "Inbox (7 cases)" with entries for "Demantis, Gail (1)" and "Farmer, Joel (1)". The "Farmer, Joel (1)" entry is selected, showing details like "SSN: 574-92-9292", "Birth Date: 01/15/1970", and "Case # Training6-D-2". The "Attachments" section displays various medical images and reports, including "Vital Signs", "Spirometry", "Spirometry Calibration", "arm", "hand", "Tympanogram", "Otoscope", "SCAN1", and "ECG Report".

Bottom Center Screenshot: Shows a video capture window for a tympanogram. It features a large circular image of the ear. To the right of the image are buttons for "Take Picture", "Live", "Freeze", "Save", and "Cancel". Below the image, the "Image Name" field is set to "Left TM2".



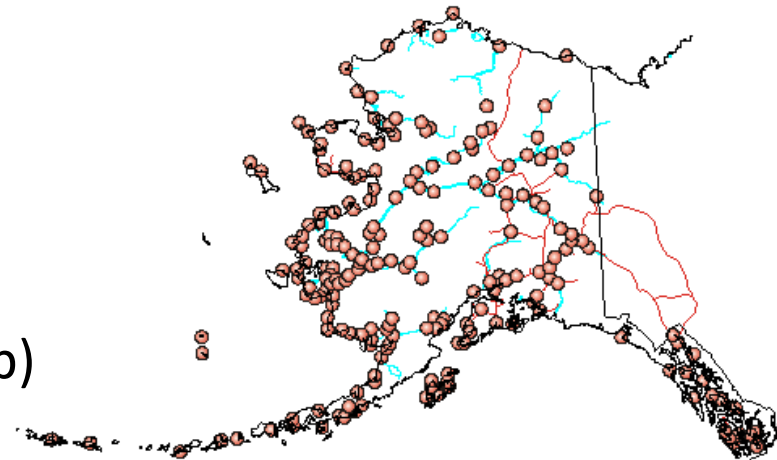
AFHCAN Telehealth Program



- Managed by ANTHC
- Federally funded
- 28 Staff
- 11 year Operational History
 - 33,000 cases/year
 - 131,628 Cases (ATHS)

Installed Customer base includes:

- ▶ Alaska: 248 sites, 44 organizations
 - 59 operational systems in 2011
 - 1,443 providers in 2011
 - 22,763 patients in 2011 (16% of AN pop)
- ▶ Other states and countries



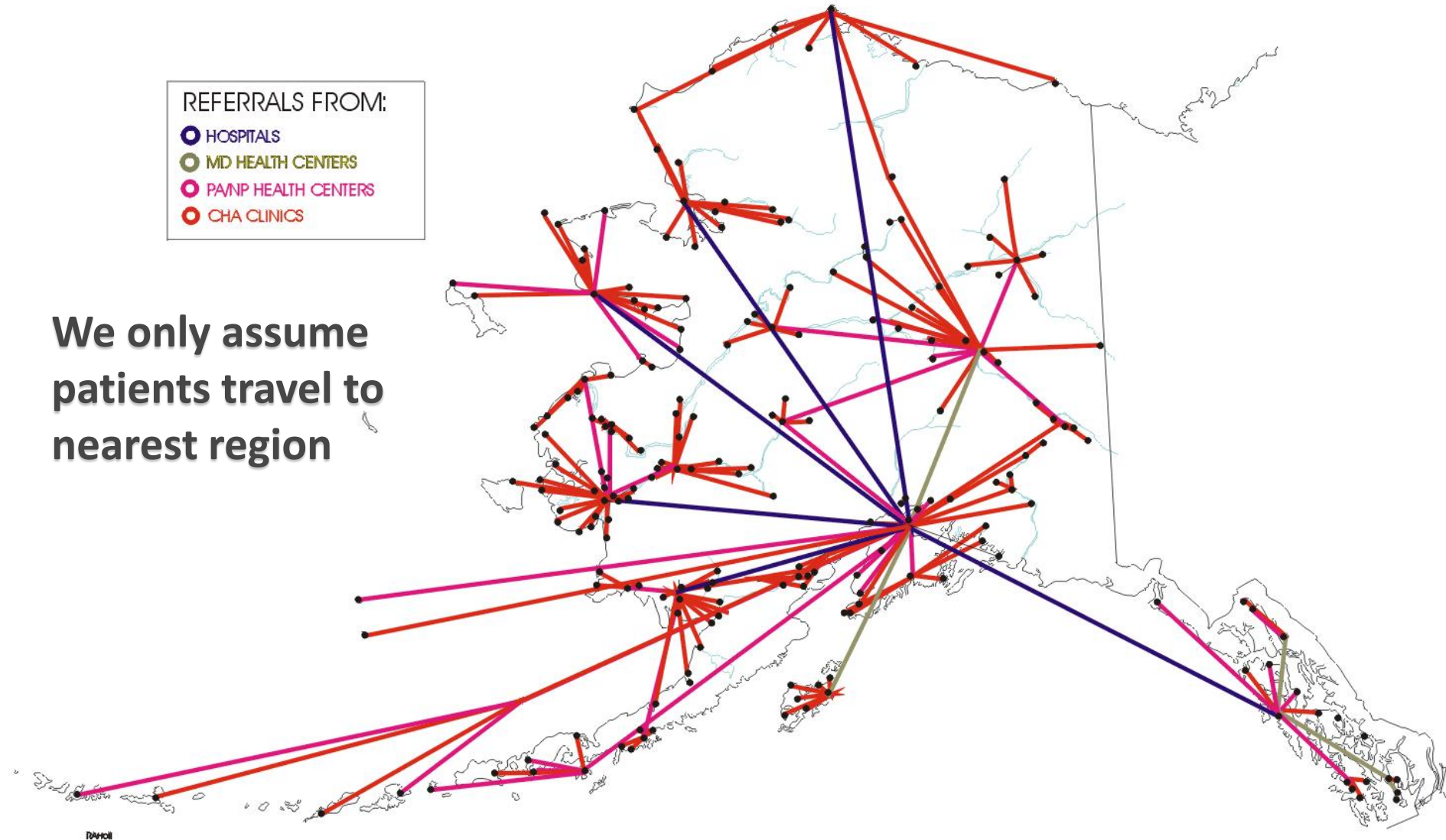
THE ALASKA NATIVE HEALTH CARE SYSTEM

Typical Referral Patterns

REFERRALS FROM:

- HOSPITALS
- MD HEALTH CENTERS
- PAINP HEALTH CENTERS
- CHA CLINICS

**We only assume
patients travel to
nearest region**



Role of Telemedicine

- S&F
 - 3% of encounters (FY11)
 - Primary Care (75%)
 - Specialty Care (25%)
 - Triage / Planning
 - Discharge Planning
 - Esoteric : Abuse ...
 - Teleradiology
 - Telepharmacy
- VtC
 - Cardiology
 - Liver/Hepatitis
 - Pediatrics
 - Breast Cancer Screening
 - Mental Health / API
- HTM

Audiology
Cardiology
Care Coordination
Center
Dental
Dermatology
Emergency
Department
Endocrinology
Family Medicine
Gastroenterology
HIS
Internal Medicine
Neurosurgery
Ophthalmology
Orthopedics
Otolaryngology
Pediatrics-
Outpatient
Podiatry
Pulmonology
Rheumatology
Surgery
Urology
Women's Health



By the numbers ...

131,628 Cases created

65,314 Patients served

2,968 Providers involved

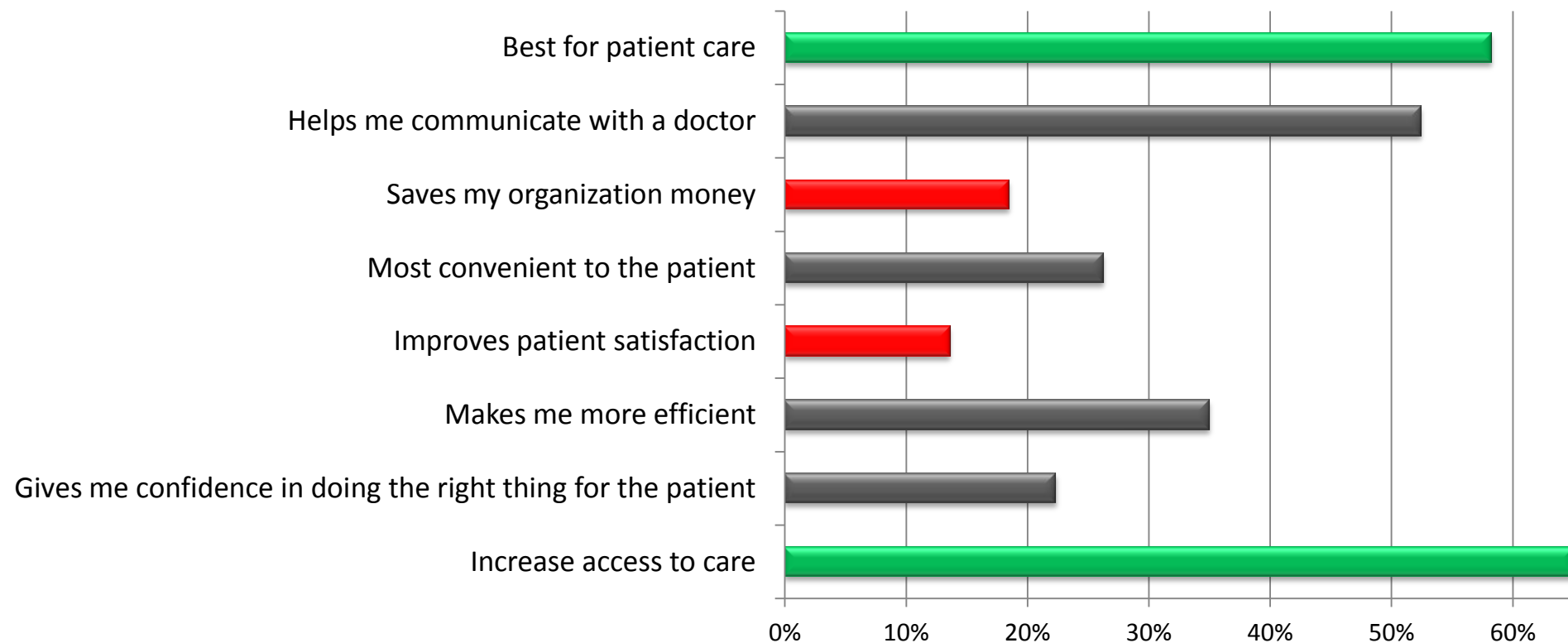
1,854 Providers creating



TELEHEALTH WORKS – THE IMPACT OF TELEMEDICINE



Why do you do Telemedicine?

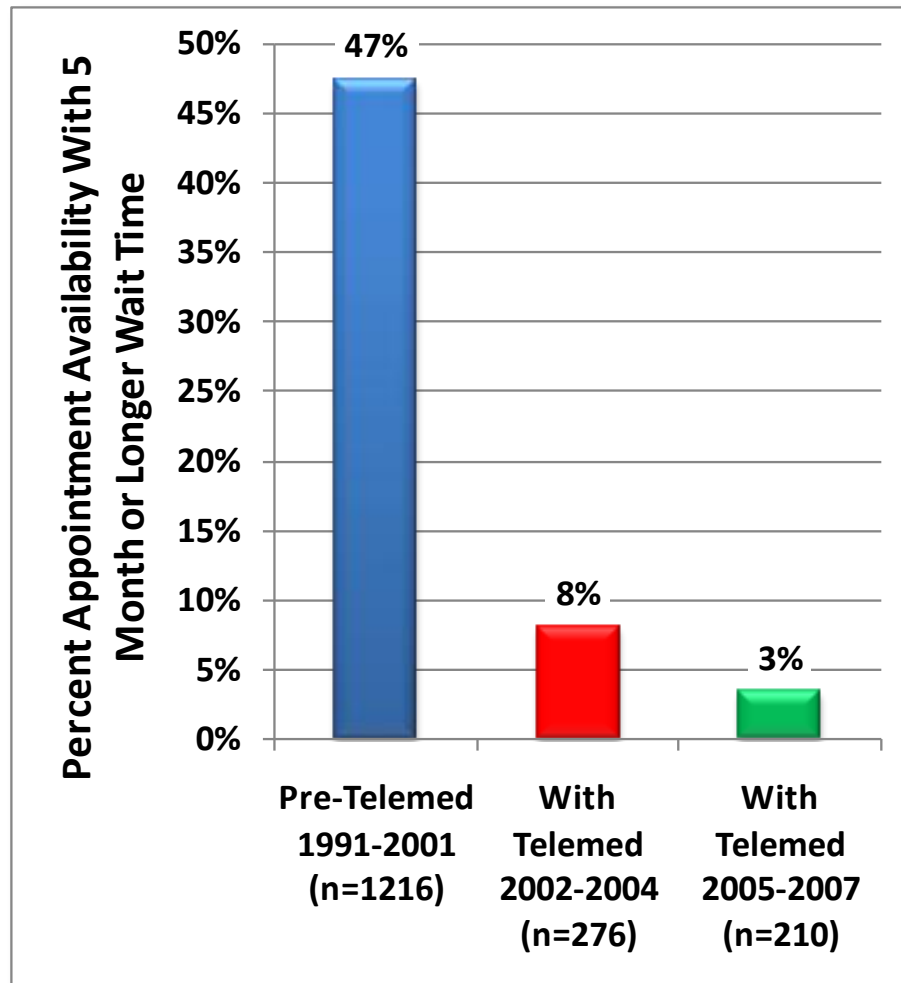


↑ Best for patient care

↑ Increased access for care



Telehealth Impact on Extended Waiting Times (> 4 months)



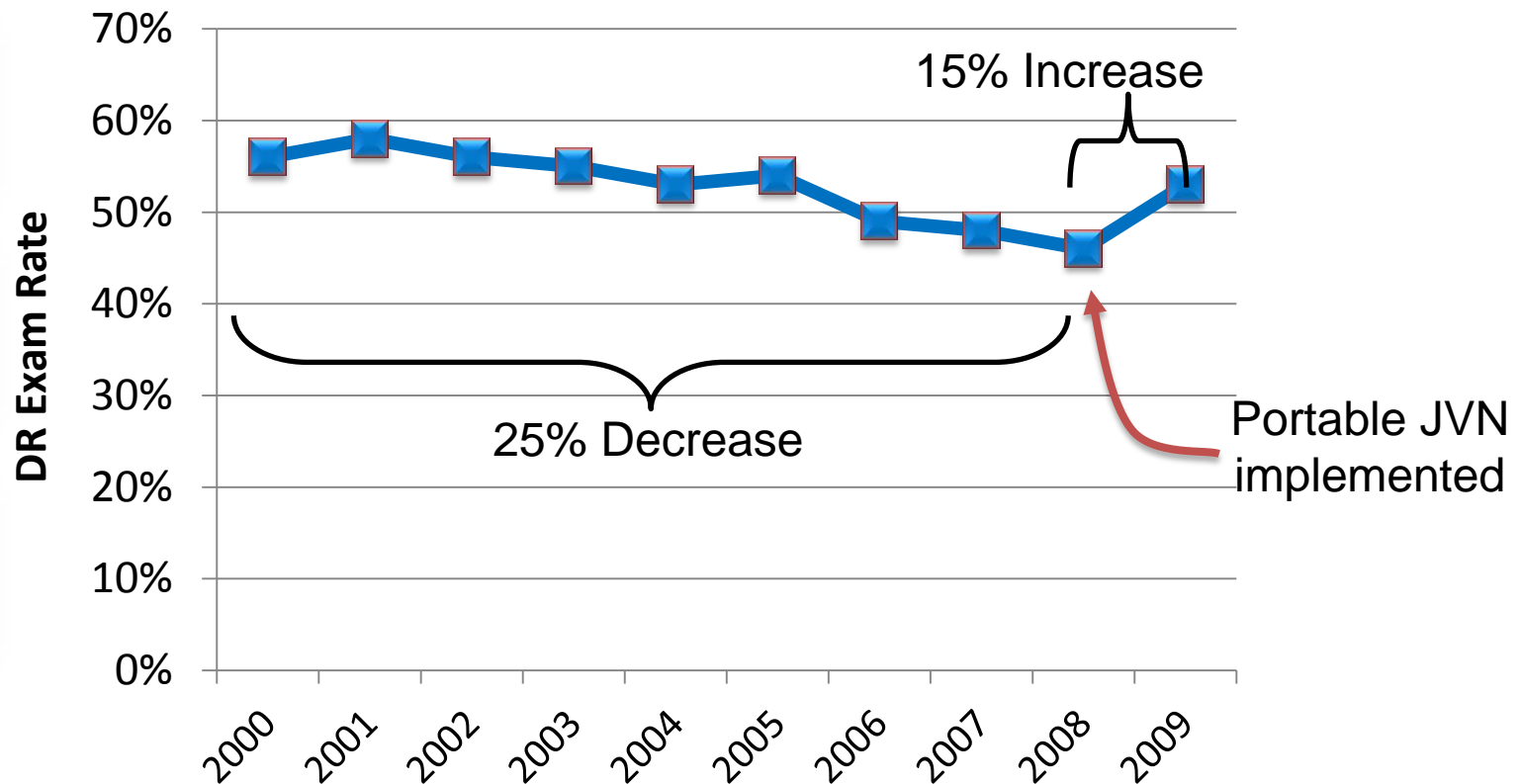
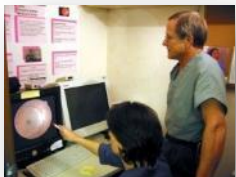
Data courtesy of Phil Hofstetter



Joslin Vision Network (JVN)

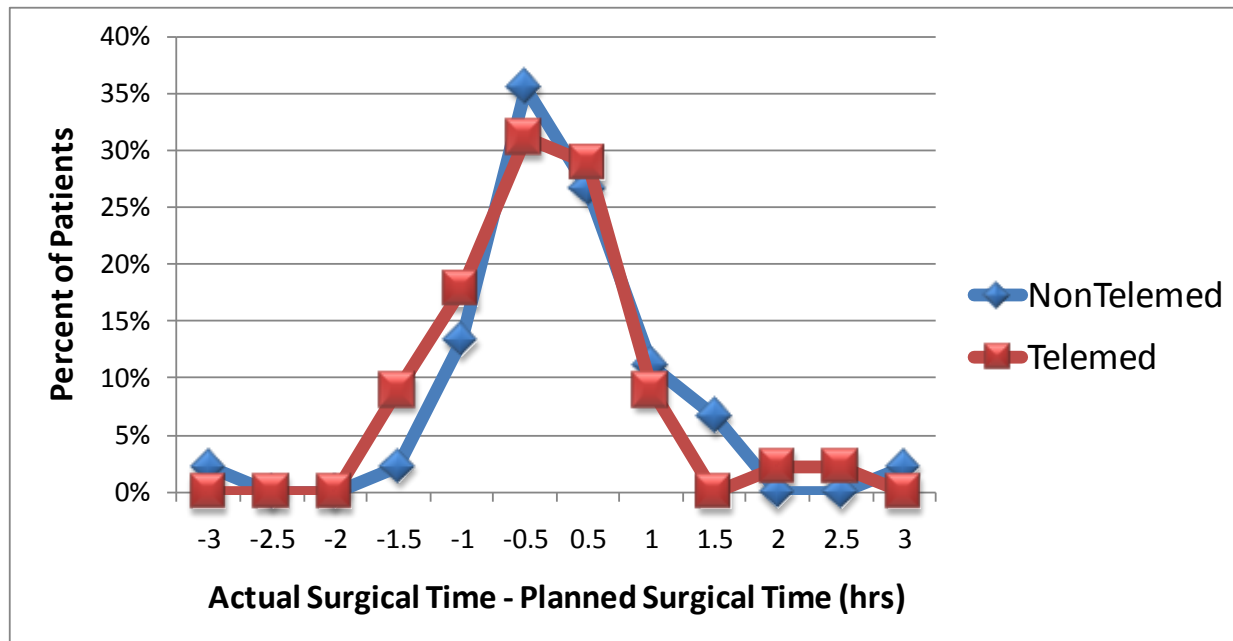
Portable JVN Pilot

Deployment of the IHS-JVN in Alaska using a portable platform reversed a seven year decline in rates for the state



Pre-Operative Planning for Ear Surgery Using Store-and-Forward Telemedicine

John Kokesh M.D., A. Stewart Ferguson Ph.D., Chris Patricoski M.D.

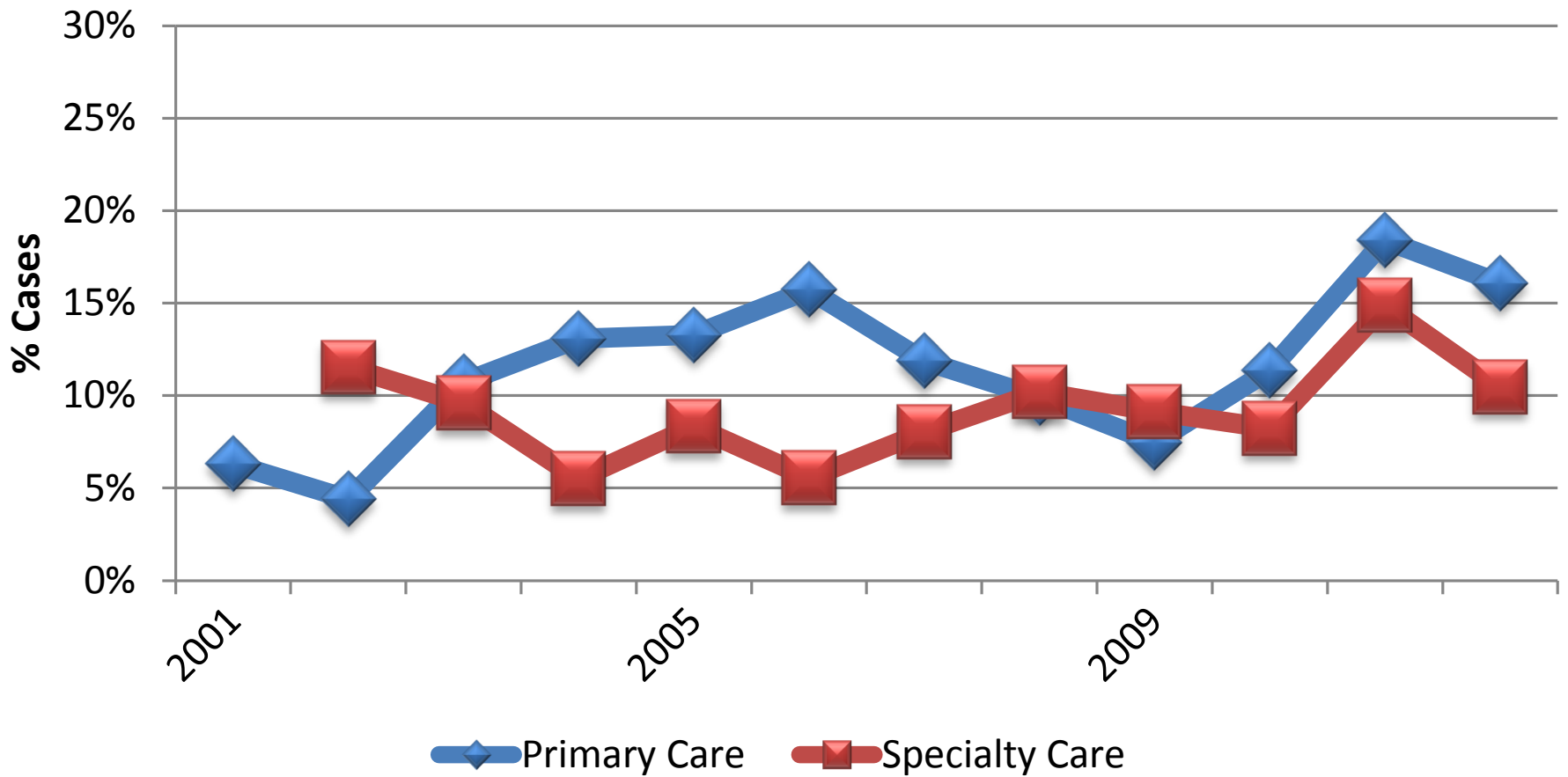


The average difference was not statistically different between the two groups: 32 minutes for the telemedicine evaluation group and 35 minutes for the in-person evaluation group

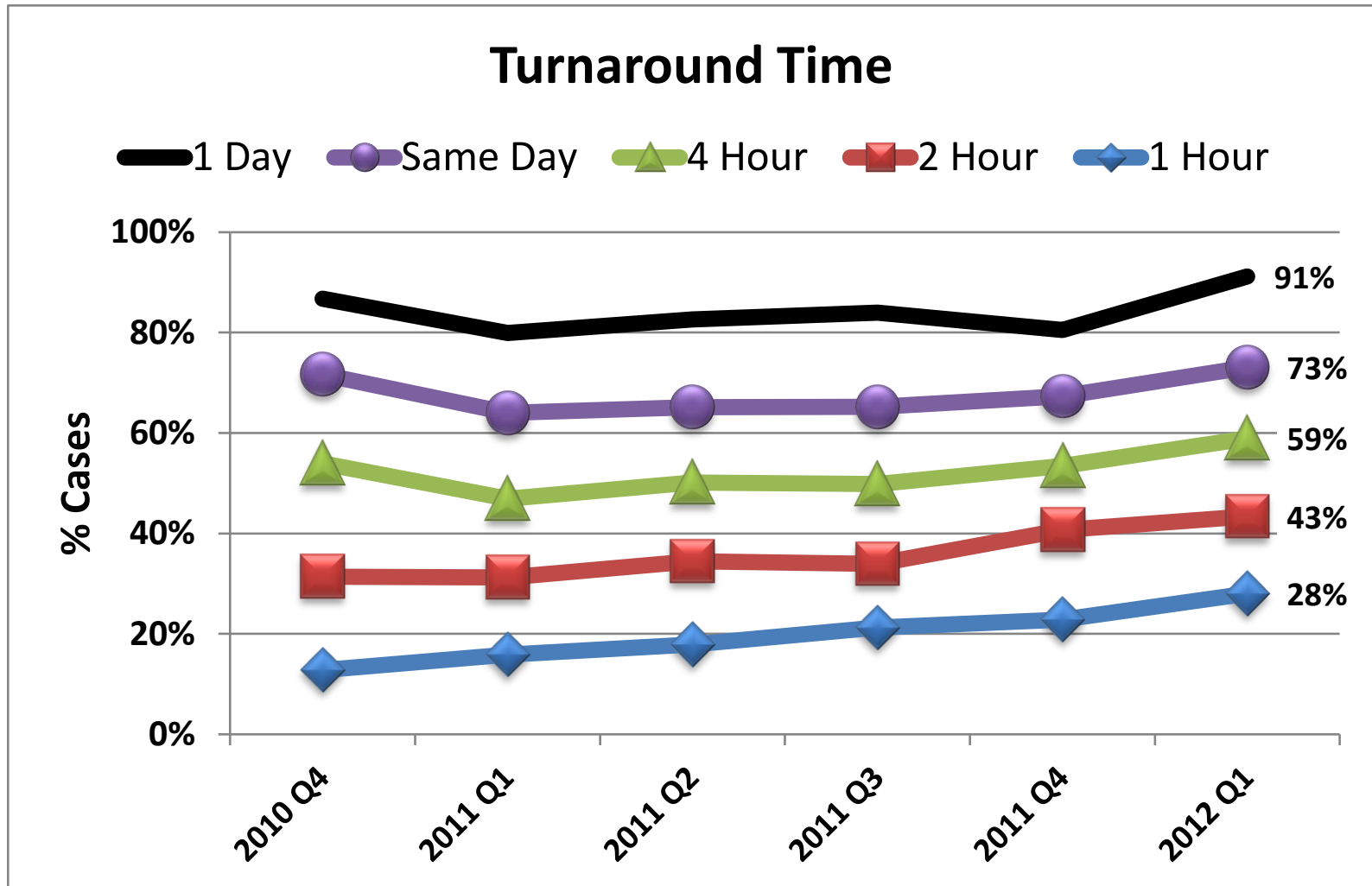
Comparison of surgical time (actual surgical time – estimated surgical time) for telehealth and non-telehealth cases. Values in the right half of the plot represent cases which took longer than planned (42% of telehealth cases and 47% of non-telehealth cases); values in the left half represent cases that took less time than planned (58% of telehealth cases and 53% of non-telehealth cases)



Travel CAUSED (by Case Role)



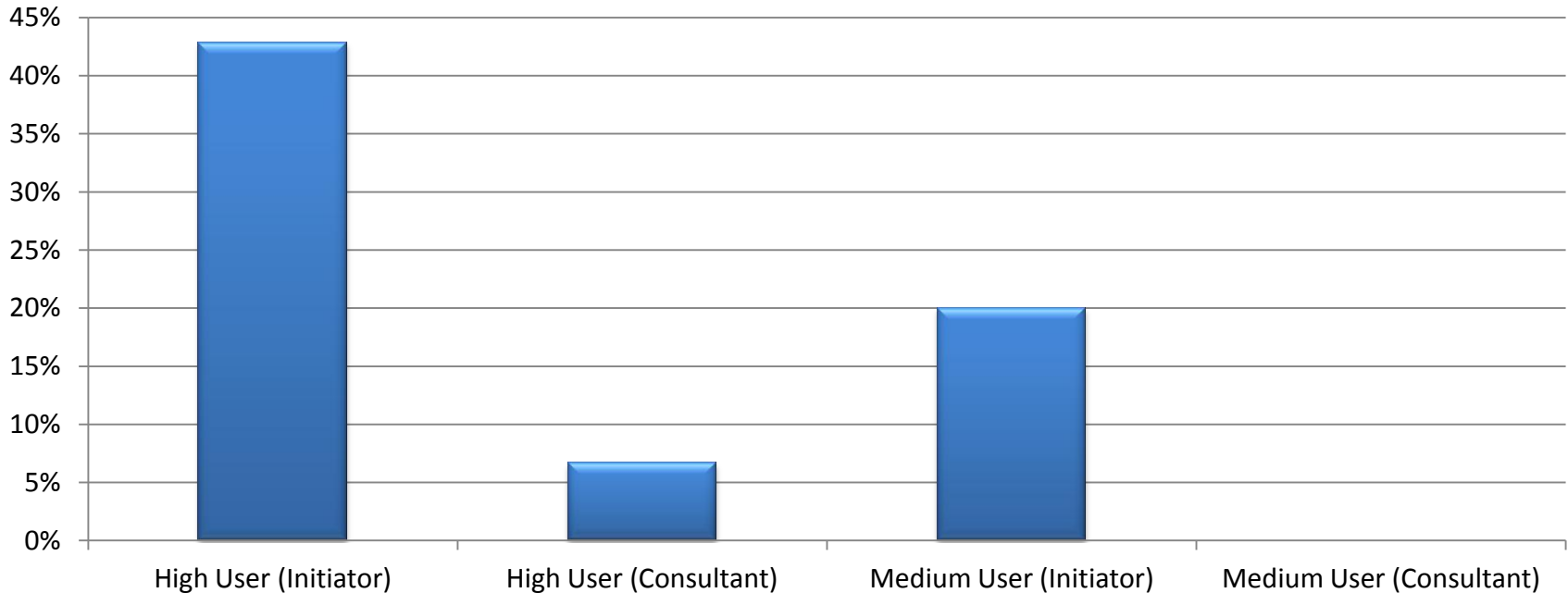
Speed of Reply



How important is the speed of reply?

(% “Extremely Important”)

When using AFHCAN for patient care – how important is the speed of reply of the consulting doctor?



- Speed of response is clearly more important to Initiators compared to Consultant
- High User Initiators (>500 cases) - 43% rated this 5 out of 5 (“Extremely Important”)



ANMC Special Initiatives

- Specialty Clinics receive over 40,000 faxed referral and consultation requests per year.
- ANMC needs to coordinate delivery of discharge instructions throughout the state. Est. 20,000 in FY12 via telehealth

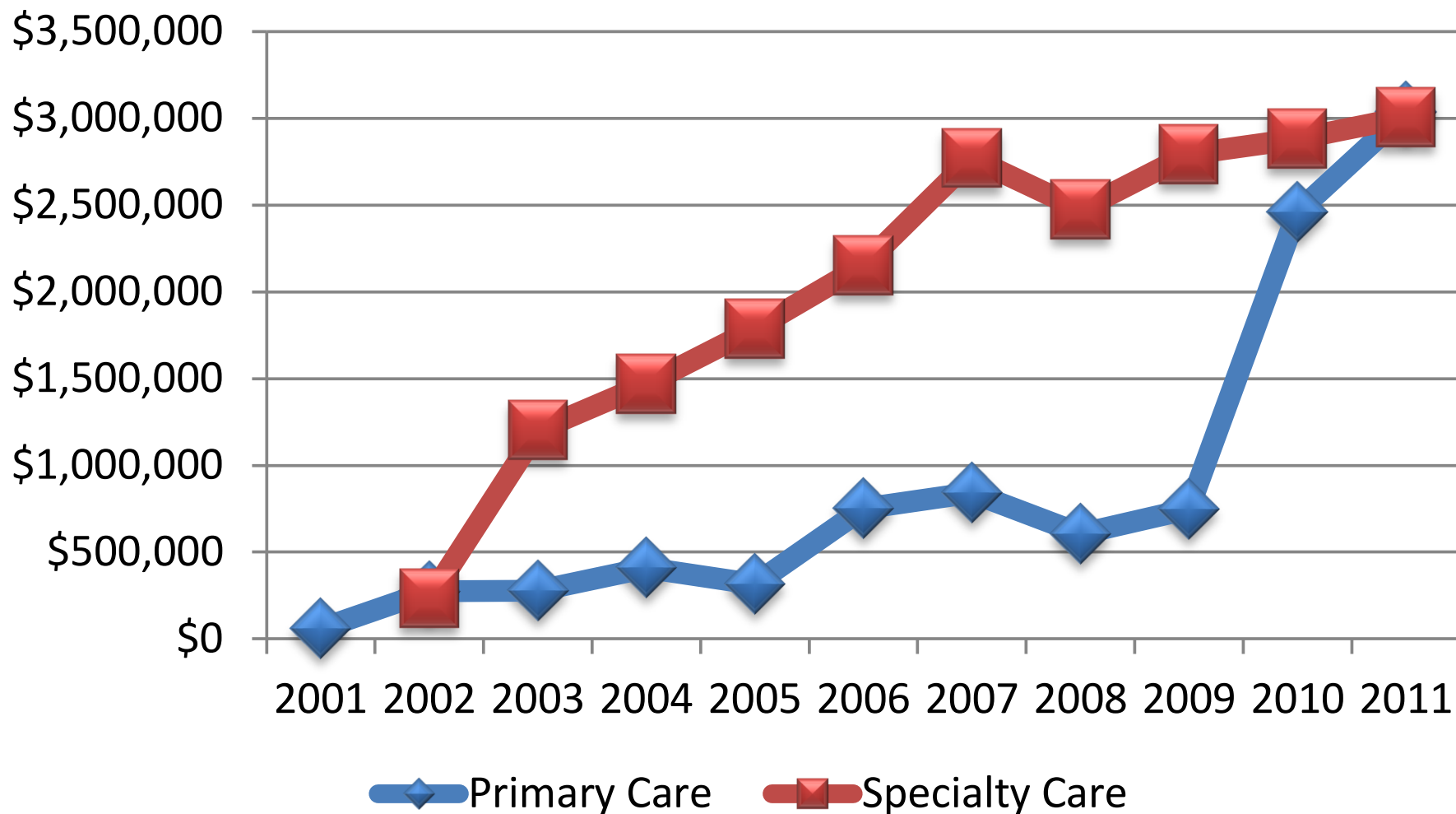




THE “BUSINESS CASE” FOR TELEHEALTH

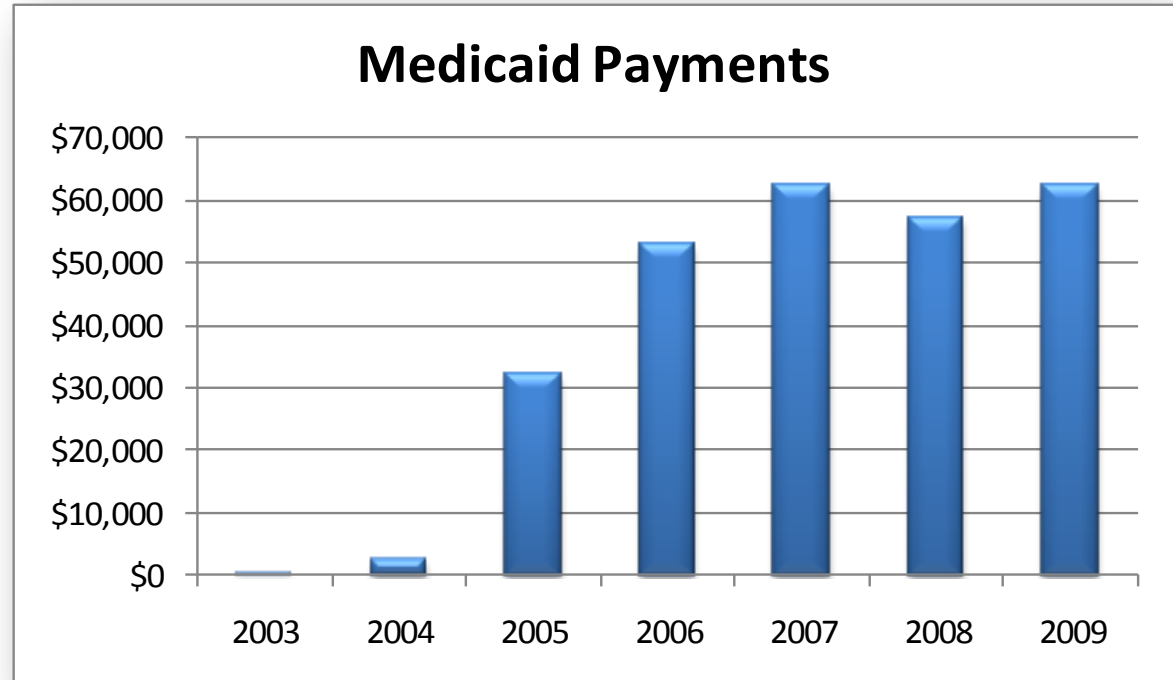


Annual Travel Savings (by Case Role)



Medicaid-Eligible Patients

Medicaid payments totaled **\$269,893 to ANMC** for specialty telehealth consults.



A total of 5,925 telehealth specialty consults with provided to 3,663 unique patients.



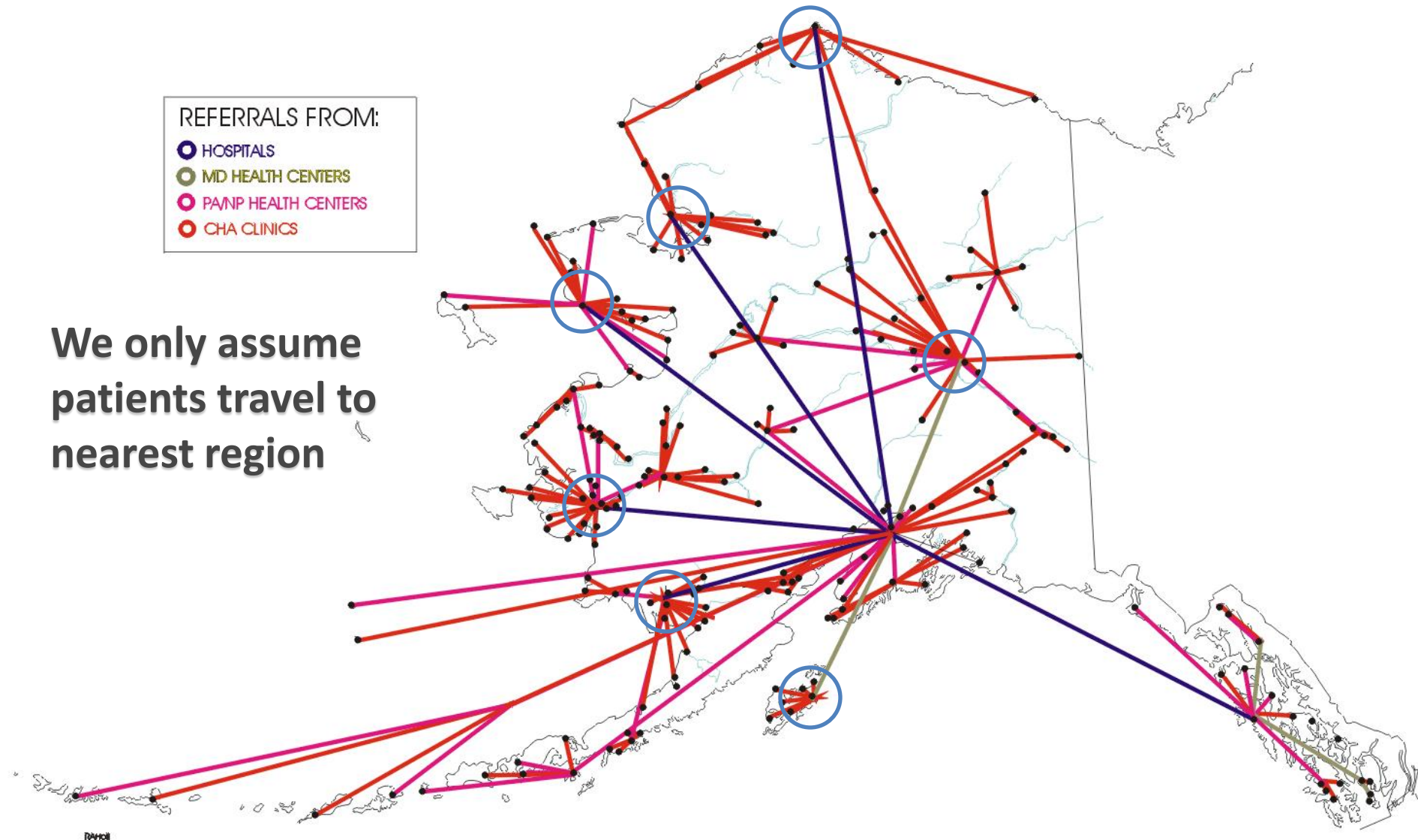
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Medicaid Study: 2003-2009

Decreased Travel = Cost Savings

	Quantity	Cost
Claims Paid by Medicaid	4,482	(\$269,894)
Telemedicine Prevented Travel	3,662	\$3,116,034

Notes:

- Travel is saved for 75% of all patients.
- Assume all patients under 18 need an escort
- Travel costs based on 1 week advance fares

Net Savings Realized by Medicaid	\$2,846,140
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Note: For every \$1 spent by Medicaid on reimbursement, \$10.54 is saved on travel costs.

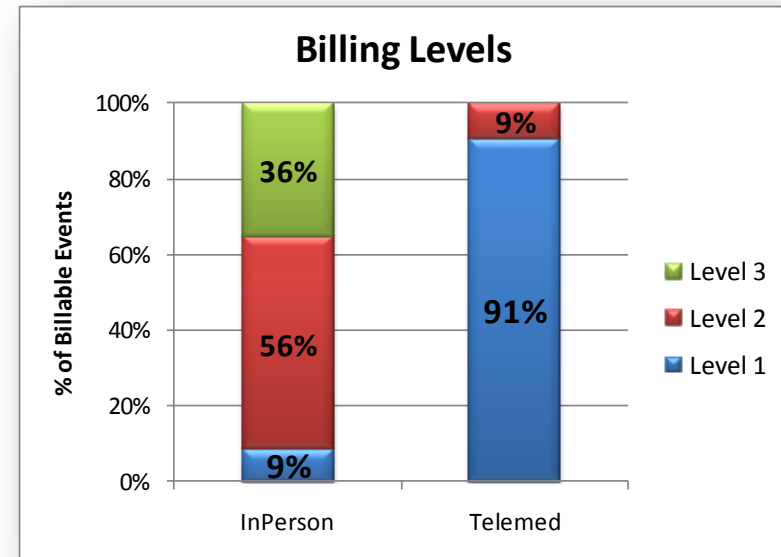
Outreach clinics saved another \$3.4m in travel costs



Who Reaps the Financial Benefit?

Telehealth revenue is 45% less than inperson revenue

- Telehealth → Level 1 (91%)
- InPerson → Level 2 (56%) and Level 3 (36%)
- Single procedure versus multiple procedures
- Telehealth → No Facility Fee



Reimbursement model undervalues **system** benefits from S&F telemedicine

- Cost savings (travel, loss of time from work)
- Improved access for care
- Clinical outcomes



Challenges

- Competing forces could drive usage down.
 - Competition for time of provider – best reimbursed with face-to-face.
- Budgets are tighter – EHR consumes significant time and resources. Does not necessarily improve efficiency.
 - Meaningful Use Stage 1 & 2, ICD10
- EHR are not telehealth friendly – process (registration through coding), etc.





LESSONS LEARNED FROM OTHER PROGRAMS







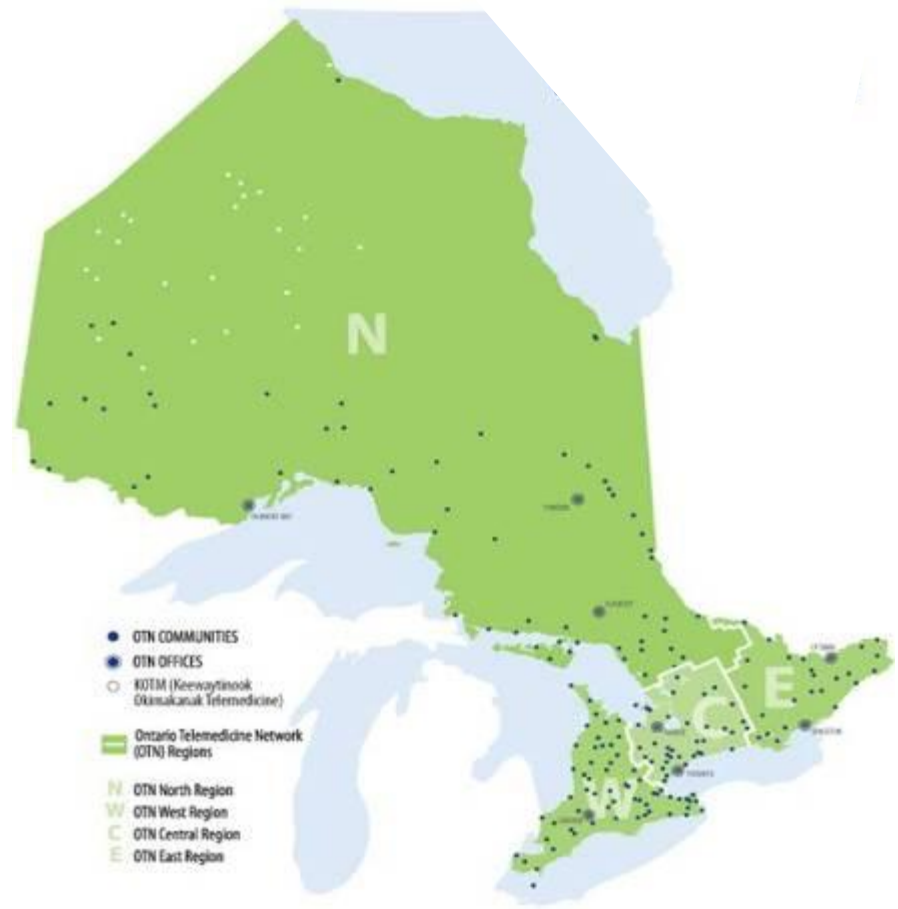
Ontario:
415,000 sq mi
13 M people

OTN: Available Everywhere

At March 31, 2012:

- 1,443 sites
- 2,630 telemedicine systems

Net 268 sites and 434 systems added in 2011/12

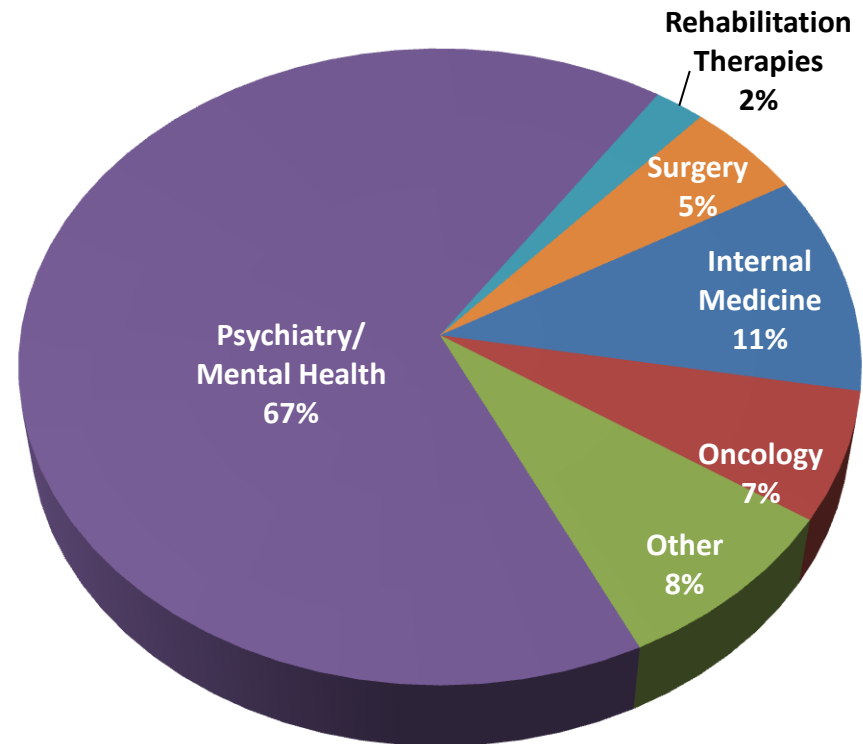


2011/12 Clinical Utilization

Annual Growth		
Clinical Events	204,058	52%
Consultants <ul style="list-style-type: none">• Physician• Allied	1,685 1,208 477	13%
Regular User Consultants	1,046	22%

Therapeutic Areas of Care 2011/12

Annual Growth:	
Psychiatry/mental health	100%
Internal medicine	26%
Oncology	15%
Surgery	14%





2. Acute Care

Provincial 24/7 On-call:

- Tele-stroke
 - 203 tPA deliveries in 2011/12
- Sign language services
- Burn

Regional Programs:

- Crisis psychiatry
 - Hospitals avoided 625 admissions in 2011/12
- Critical care
- Trauma
- Long-term care



What Does OTN Do?

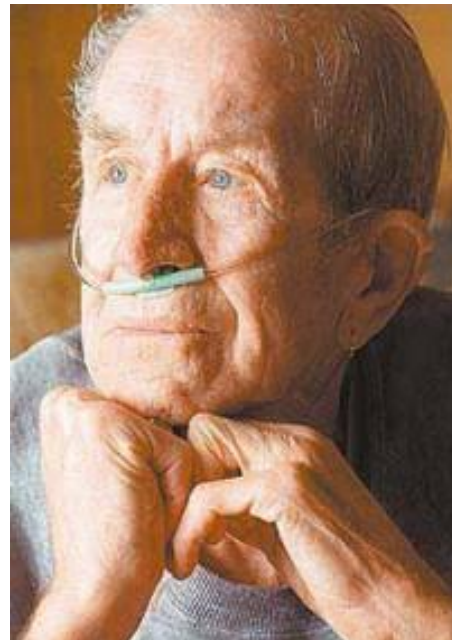
1. Support a single, harmonized, governance model
 - Standards & processes
 - Inclusive membership model
2. Provide a set of centralized services
 - Turnkey Technical Support – Training – Privacy & Security – Scheduling
 - Reporting
3. Drive adoption



Telehomecare/CDM Study Outcomes

Self-reported data from 813 enrolled patients with CHF and COPD

- 64 – 66 % decrease in hospital admissions
- 72 – 74% reduction in emergency department visits
- 16 – 33% decrease in number of primary care physician visits
- 95 – 97% reduction in walk-in clinic visits
- High levels of patient and provider satisfaction





Partners Home Care Stats and Facts

- Towns and Cities: 175
- Average Daily Census: 3,600
- Admissions Annually: 26,000
- Visits/Year: 420,000
- Age range of patients: 0 – 106

Payer mix

- Medicare: 52%
- Medicaid: 5%
- Insurance: 41%
- Free Care: 2%

Technology

- Telemonitoring devices 300
- Personal Emergency Response Units: 4000

Top Diagnoses: Heart Failure Diabetes
COPD, Stroke

Primary Population

Elderly 65 and older
Lives in private home or Assisted Living Facility

2 Programs **

Each focused on patient self-management success, disease management, and decreased re-hospitalization rates.

Telemonitoring & Homecare

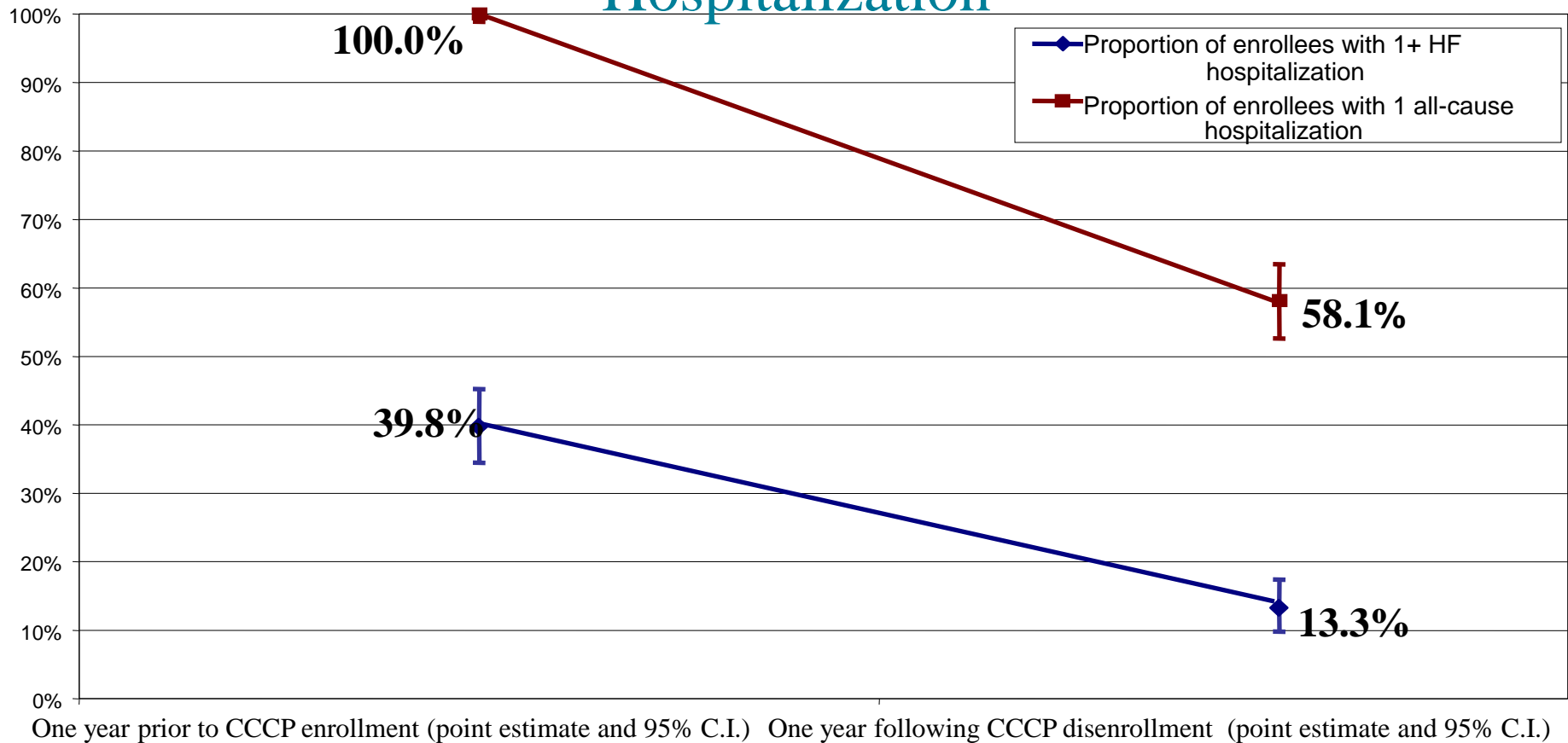
- Medicare patient
- Must be able to reduce nursing visits
- Reimbursement: none

Connected Cardiac Care Program (CCCP)

- Patient with PHS MD
- Not eligible for traditional Home Care
- Diagnosis of HF
- Reimbursement - PHS

****Private Pay is also an option****

Proportion of CCCP enrollees with one or more Hospitalization



Data Includes 332 CCCP enrollments among 301 unique patients discharged from the CCCP program prior to July 1, 2009. Results are similar within more recent cohorts of enrollees discharged from the program prior October 1, 2009 and prior to January 1, 2010.



NEXT STEPS – WHAT’S POSSIBLE



Common Interests

- Desire greater efficiency from providers
- Need to reduce re-admits
- Need stewardship of appointments
- Advance Specialty Access and same-day appts
- Deliver care at patients medical home
- Get the most and best medical care for the \$
- Spend less on travel, more on care.
- Prevent disease, or catch disease earlier.
- Slow growth of health care expenditures, create a healthier population and lower future costs.



**SHARED INTEREST
... BUT NO VISION, NO PLAN**



#1. CREATE A TELEHEALTH VISION



OTN Vision

Telemedicine will be a mainstream channel for health care delivery and education.



Telemedicine will be fully integrated into healthcare systems to improve quality, access, equity and affordability of healthcare throughout the world

ATA Vision, 2012

In general, state laws say-- A health benefit plan may not deny coverage on the basis that the coverage is provided through telemedicine if the health care service would be covered were it provided in-person.

#2. MANDATE REIMBURSEMENT



The following 15 states, covering over 123 million Americans, have adopted mandates for the coverage of telemedicine

- California (1996)
- Colorado (2001)
- Georgia (2006)
- Hawaii (1999)
- Kentucky (2000)
- Louisiana (1995)
- Maine (2009)
- Maryland (2012)
- Michigan (2012)
- New Hampshire (2009)
- Oklahoma (1997)
- Oregon (2009)
- Texas (1997)
- Vermont (2012)
- Virginia (2010)

In 2012, bills have already been introduced or are still pending in Arizona, Connecticut, Rhode Island, and South Carolina. In 2011, Florida, New Jersey, New Mexico, Ohio, and Pennsylvania had pending legislative proposals.



Range of Options

- A health benefit plan may not deny coverage on the basis that the coverage is provided through telemedicine if the health care service would be covered were it provided in-person. Coverage for services provided by telemedicine shall be determined in a manner consistent with coverage for provided in-person.
- Mandate that Alaska State employee's health plan covers benefits provided by telehealth
- Home health care or home- and community-based services delivered through telemedicine are covered by and reimbursed under the Alaska Medicaid program



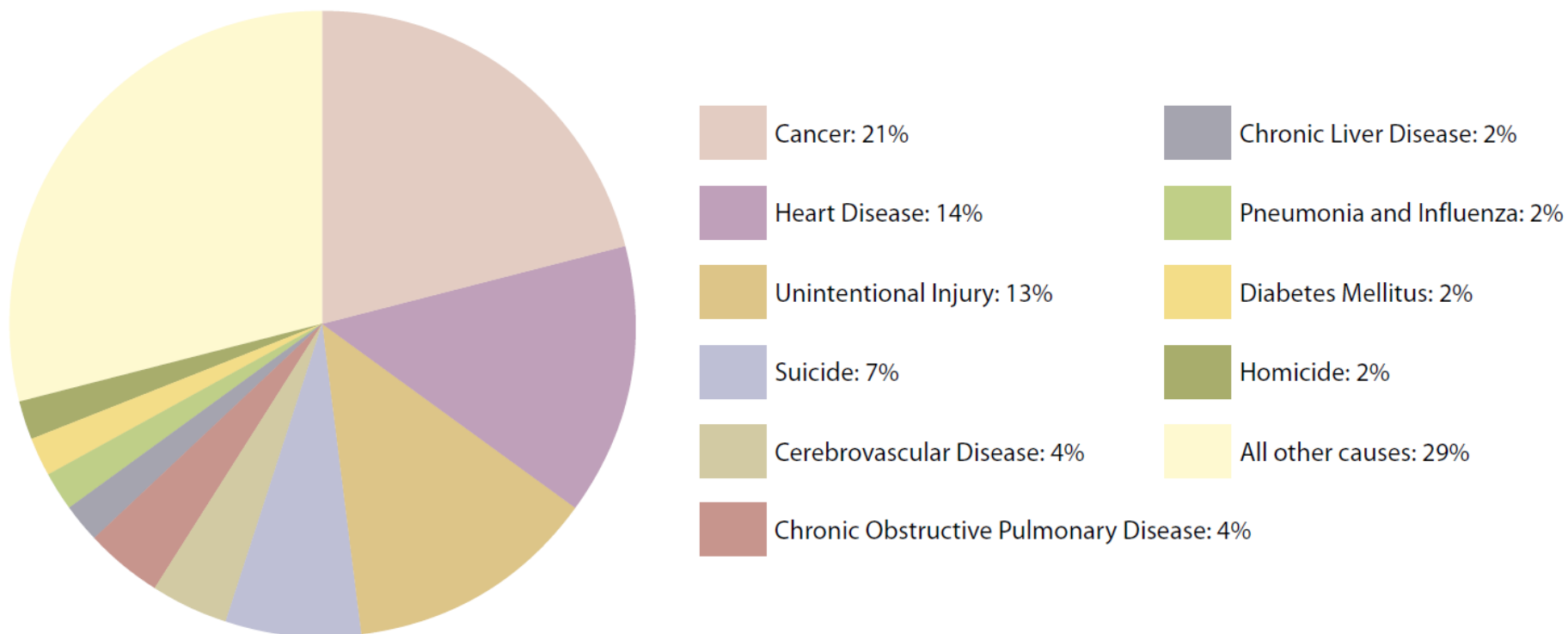
#3. DEVELOP STATEWIDE STRATEGY



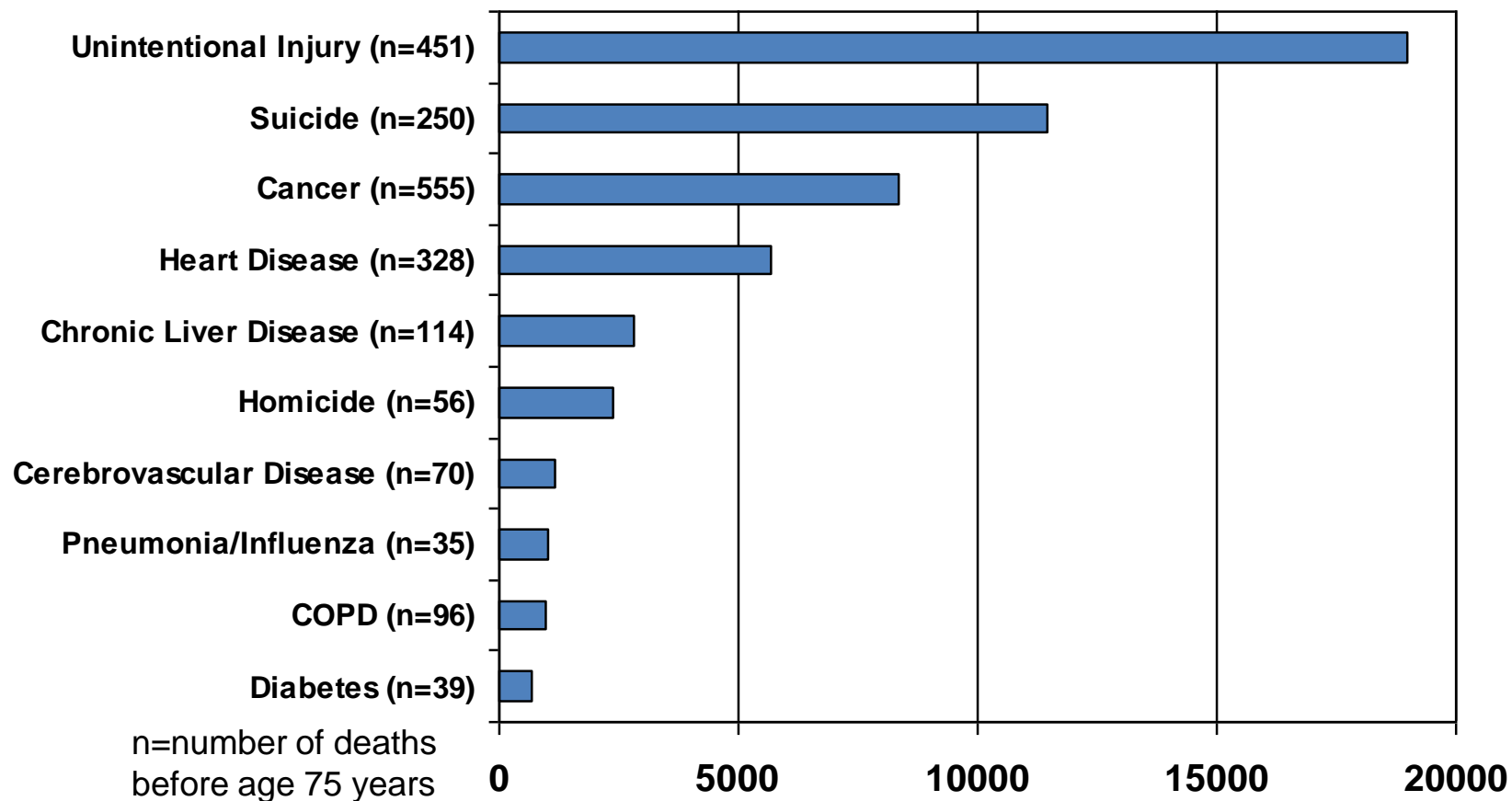
What's Possible



Leading Causes of Death, Alaska Natives, 2004-2007



Years of Potential Life Lost, Alaska Natives, 2004-08



Hospitalizations by Diagnosis Groupings, Alaska Tribal Health System, Alaska Natives, Fiscal Year 2007

Data Source: I.H.S. National Data Warehouse

Note: ICD-9 Codes in each group are listed in parentheses

Rank	Cause	Number	Days	Average Length of Stay	% Total
1	Complications of Pregnancy, Childbirth and the Puerperium (630-677)	2,596	6,566	2.5	18.0%
2	Diseases of the Respiratory System (460-519)	1,579	8,655	5.5	11.0%
3	Injury and Poisoning (800-999)	1,456	7,143	4.9	10.1%
4	Diseases of the Digestive System (520-579)	1,296	6,046	4.7	9.0%
5	Mental Disorders (290-319)	696	2,419	3.5	4.8%
6	Diseases of the Circulatory System (390-459)	676	3,738	5.5	4.7%



What's Possible

- Suicide Prevention using VtC and Crisis Intervention
- PTSD and TBI services
- Home Telehealth Monitoring for chronic illnesses
- Pediatric Specialty Services
- Centralized scheduling and end point management
- Integrated EHR, HIE, Telehealth systems



Statewide Pilots

State of AK should take an active role in exploring partnership opportunities with ANTHC and others to manage the rising costs of health care. Invest in pilots to:

- Increase reimbursement for S&F
 - Promote usage, accelerate travel savings, and promote new care models.
- Manage costs for high utilization chronically ill patients through HTM.
- Invest in central services to ease the onramp for VtC (support, scheduling, ...)





**COMMON INTERESTS +
COMMON NEEDS +
COMMON GOALS = PARTNERSHIP**

